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ABSTRACT

A curriculum based on "anchored instruction" was developed to enhance students' literacy development and acquisition of knowledge. The curriculum was designed to create a rich, shared environment that generates interest and enables students to identify and define problems while they explore the content from many perspectives. Based on what is known about effective teaching, anchored instruction was developed to provide opportunities for teachers and students to work cooperatively in shared experiences. For example, the film "The Young Sherlock Holmes" (on videodisk) was used as a primary anchor or focus for relating content across subject areas. The use of a focus (i.e., the film) encourages students to view anchors from their own perspectives, to link learning across subject areas, to find information to explore problems that they identify, and to experience changes in their comprehension as they are introduced to new ideas from the teacher, from the texts, and from their peers. The seven key decision points which guided the development and implementation of anchored instruction relate to: (1) choosing an appropriate anchor; (2) developing shared expertise around the anchor; (3) expanding the anchor; (4) using knowledge as tools for problem solving; (5) teaching with the anchor; (6) merging the anchor with literacy experiences; and (7) allowing student exploration. (Seventeen references are attached.) (RS)

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IMPLEMENTING ANCHORED INSTRUCTION: GUIDING PRINCIPLES FOR CURRICULUM DEVELOPMENT

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IMPLEMENTING ANCHORED INSTRUCTION:

GUIDING PRINCIPLES FOR CURRICULUM DEVELOPMENT

This paper will describe the design principles of a curriculum developed to enhance students' literacy development and acquisition of knowledge. We first present an overview of our work in video-based macrocontexts (Bransford, Kinzer, Risko, Rowe, & Vye, 1989), including a brief description of our research project. We then identify instructional decisions that guided our curriculum development.

The goal for our curriculum, based on what we have called "anchored instruction," is to create a rich, shared environment that generates interest and enables students to identify and define problems while they explore the content from many different perspectives (Bransford, Vye, Kinzer, & Risko, in press). We have reported previously results of investigations that have demonstrated the effectiveness of anchored instruction for enhancing students' vocabulary, reading comprehension, writing, and knowledge of social studies concepts (Kinzer, Risko, Vye, & Sherwood, 1988; Risko, Kinzer, Goodman, McLarty, Dupree, & Martin, 1989). The design principles discussed here are grounded in research (referenced above, partly supported by OERI grant G008710018) and can be applied by others who wish to implement an anchored instructional approach, especially using a videodisc-based anchor.

Overview

We have been exploring the value of providing anchored instruction to enhance students' development of literacy knowledge and general knowledge across the curriculum. We used the film (on videodisc) The Young Sherlock Holmes as our primary anchor or focus for relating content across subject areas. The use of this film helped us to meet

several goals of anchored instruction. First, the content of the film is sufficiently rich to support sustained thinking about target concepts. For example, students were immersed in the exploration of the film to study plot and subplot information and to identify characteristics of a well-developed story. Students were encouraged to define story attributes and to monitor their perceptions of how story elements relate to each other (e.g., how character motives lead to goal statements) and to their comprehension of plot development (e.g., the resolution of goal statement). Students used this information to compare the Sherlock story to other stories, including written mysteries, and when writing their own stories.

Second, the anchor was rich with the information that was needed to comprehend related text and for class discussions. Often, students have comprehension problems or have limited access to class discussions because their prior knowledge is insufficient or not accessed appropriately. Video-based anchors extend instruction beyond the typical lecture, text and workbook approach to delivering information because they contain much richer and more easily-processed sources of information than are available in verbal, or even written description. With videotape, we can combine dynamic, visual and auditory information (e.g., facial expressions, affective states, gestures, voice inflections, scenes of towns) with oral language and print. With the introduction of computer-controlled, random access videodiscs, however, we have the additional ability to return almost instantly to any segment and re-view the events. This rapid access to rich information can have powerful effects on students' learning and cognitive development because it increases opportunities for finding relevant issues that are embedded in the video (Bransford, Sherwood, Hasselbring, Kinzer, & Williams, in press).

Third, the content of the film, set in turn-of-the-century Victorian England, permitted students to integrate skills and knowledge that in traditional curricula remain disconnected. Students acquired useful information about what it was like to live during this time in history as they explored the film for multiple reasons. Their perceptions and understanding of the Victorian era was expanded as they studied the film and related texts to identify historical, political, geographical, and technological issues relevant to this time period.

Fourth, using the film as an anchor provided a shared learning context for mediation. Students who view video in the absence of a mediator may be entertained, but they may miss most of the opportunities for learning that the video provides. Traditional instruction is limited, also, because too often teachers tell students answers instead of providing problem solving environments in which students acquire methods to frame problems and use information independently. Conversely, teachers in our curriculum mediated students' learning by arranging instructional conditions and providing instructional feedback that helped students to recreate and examine mutually familiar information so that discussion and learning was facilitated.

Description of Research Project

Our research on anchored instruction was conducted over a three year period in two fifth grade classrooms. The main goal of our project was to develop a video-based, anchored curriculum and to assess its effect on students' critical thinking and independent use of information. Second, we planned to develop a curriculum that could be implemented by classroom teachers.

During the first two years of this project, students participated in either the experimental, anchored program, or the control program. Students in both programs

viewed the film and were introduced to the same basic content (e.g., vocabulary words, story elements, social studies concepts). The major difference between the experimental and control programs involved the use of the video-based anchor. In the experimental program, each lesson was tied to the anchor. In the control program, lessons followed the more typical format of focusing on target concepts within contexts that were unrelated to each other. There was no long-term macrocontext, or anchor, for the control program. Across the two years, analyses of data collected from multiple sources (students' pre- and posttests, field notes and analysis of video and audio tapes, and student and teacher interviews) reveal large differences between the experimental and control students on measures of vocabulary knowledge, reading comprehension, and students' independent use of target information (e.g., use of story elements to structure their writing) (Bransford, Kinzer, et al., 1989; Kinzer, et al., 1988; Risko, et al., 1989).

Instructional Principles for Curriculum Design

A careful examination of our lesson plans, extensive field notes recorded during classroom observations, and interview data helped us to identify seven major decisions that guided the curriculum development. We believe that these decisions have implications for instruction beyond the scope of our project; they are general and need to be considered when developing any anchored curriculum.

The seven key decision points which guided the development and implementation of our anchored instruction relate to: (a) choosing an appropriate anchor; (b) developing shared expertise around the anchor; (c) expanding the anchor; (d) using knowledge as tools for problem solving; (e) teaching with the anchor; (f) merging the anchor with literacy experiences; and (g) allowing student exploration.

Guiding Principle 1: Choosing an Appropriate Anchor

Choosing an anchor depends largely on the curricular goals that are targeted. That is, an anchor is not equally appropriate for all teaching situations. We began by analyzing the fifth-grade curriculum in order to clearly specify instructional goals. Once these goals were established, we examined several possible video anchors that were identified as being appropriate for the age group in terms of language, violence, interesting content, and so on.

State guidelines mandated curricular goals relating to plot, characterization, vocabulary and comprehension development in reading. In social studies, curricular goals included a unit on American and world history, while the science curriculum included units on inventions and simple machines. These became the core areas of our curriculum. We thus searched for an anchor that included a strong plot line, with clearly defined character development, definite causal structures that could be related to story grammar elements, and verbal and visual clues pertaining to a clearly definable period of history.

Potential video anchors were rejected because they were either too general, thus requiring too much external, teacher-imposed structure before curricular goals could be related to the anchor, or because they were so narrow that setting information could not be generalized to a historical time period--that is, the setting might not have included "markers" that could be targeted as indicative of a particular historical period.

Thus, the most important decision in choosing an anchor came before a range of anchors was evaluated. The critical element was a clearly articulated set of instructional goals. The choice of anchors depends on the relative match between these goals and the video anchor.

Guiding Principle 2: Developing Shared Expertise Around the Anchor

The second decision for curriculum development relates to facilitating students' expertise around the anchor. We began with the belief that a well-developed base of information could provide numerous, rich examples of target concepts that would enable the teacher and students to make links from the movie to multiple contexts across curriculum areas. However, after evaluation and observation we realized that one showing of the film was insufficient to build an awareness of the complexity of information present in the anchor.

It is not necessary to show the entire film repeatedly to correct this problem. Multiple visits to specific scenes allowed students to develop expertise on particular aspects of the anchor. Further, we needed to identify and focus our discussion on meaningful units within the film (e.g., a complete subplot) so that students had an opportunity to comprehend and organize this information. These discussions were much richer and therefore created the shared context between teacher and students that we had originally desired.

Discussions of the anchor began with the teacher taking primary responsibility for instruction; yet, the students were able to assume increasing responsibility for their learning as their knowledge of the anchor increased. This shift in responsibility from teacher to students brought about more student-generated discussion where they were able to ask important questions. They also were able to answer many of the other students' questions. Once the teacher and students had developed expertise on the anchor, the links across the curriculum and to their prior experiences became a common occurrence within the

classroom. The transition from teacher to student responsibility is natural and necessary for a shared context to emerge.

Guiding Principle 3: Expanding the Anchor

We began with an anchor that we felt was sufficiently rich to provide a foundation for our curriculum. However, we found that one anchor, even one that has a wealth of varied content, could not meet all the needs of our students and curriculum. Instead, we found that two main problems existed.

First, some gaps in information provided by the anchor required us to introduce additional, related materials. We chose another movie, Oliver Twist, and a book, The Wolves of Willoughby Chase, that were also set in the Victorian Era. The introduction of a second video, Oliver Twist, provided our students with information to contrast and extend information. For example, the living conditions of the rich, as seen in Sherlock, was contrasted with living conditions of the poor, as seen in Oliver. Additional information, used for achieving a more balanced presentation, was selected on the basis of how well it related to curriculum goals and the primary anchor. Comparisons and contrasts were explicitly made between new information and the anchor.

Second, students' interest began to dwindle as they became very familiar with the anchor. This problem disappeared when additional content sets were added. When we expanded the anchor by introducing the additional content sets, students' interest rose as they used knowledge from the first anchor to explore and understand the next.

Guiding Principle 4: Using Knowledge as Tools for Problem Solving

Our next decision related to building students' knowledge in ways that allowed them to use this information to solve problems or to relate information across content areas.

As expected, the anchor provided a meaningful shared context from which students acquired new information. However, their use of information to identify or solve other problems didn't occur spontaneously.

Several curricular decisions stood out as being most effective in helping students retrieve information when it was needed for problem solving. First, students were given a purpose for learning new information that they could accept as a valuable reason. For example, exploring the film to identify events leading to goal resolution helped students to develop a cohesive plot structure when writing their own stories. Second, students were provided with organizational tools that would help them recall information when it was needed. For example, students were shown how to use a story grammar outline to help them organize and remember plot information. Third, students were provided with opportunities to use this knowledge in real problem solving activities. For example, students assuming the role of an American Congressional subcommittee explored multiple texts before reporting on medical advances of the Victorian era. With mediation and practice, problem solving began to occur more frequently.

Teaching information well and in an interesting fashion did not insure that the students would use it in other settings. To help our students learn characteristics of situations requiring use of information, it was necessary to provide opportunities for students to find relationships among ideas within and across contexts. For example, plots and subplots were studied in their entirety so that students could trace events contributing to character motives and goals and events leading to goal attainment. Instead of asking our students to recall facts about the characters or events in the story, students received problem-oriented instruction requiring them to compare character motives and plot events

across the anchor and written materials. Such instruction provided a way for students to practice applying their knowledge and see its value in solving problems. We believe that this type of instruction increases students' ability to understand the conditions and constraints of knowledge so that transfer of concepts to new contexts is more likely to occur (Anderson, 1983, 1987).

Guiding Principle 5: Teaching with the Anchor

We anticipated that use of video in teaching would come naturally to teachers once the film had been shown and discussed in class. Although this occurred to some extent, we also found that teachers needed to consciously prepare plans incorporating specific references to scenes that would tie to their instructional goals. As we found with our students receiving anchored instruction, teachers' acquired expertise with the anchor enhanced their spontaneous use of information presented on the film. As teachers became experts on the anchor, they were more flexible in relating scenes that explicated instructional goals.

Guiding Principle 6: Merging the Anchor with Literacy Experiences

Since we believe that it is possible to strengthen reading and writing skills through the use of video-based anchors, we wanted our curriculum to provide cohesive links between visual and more traditional literacy experiences, both oral and written. While it is important to link the video anchor with literacy experiences, how they are linked is a critical issue. Literacy experiences needed to be strongly related to the anchor. For example, exploring the anchor to identify conditions contributing to characters' motives was a precursor to story writing that targeted causes for characters' actions and goal statement.

The anchor provided many opportunities to read, write, and use oral language. For example, a classroom newsletter was written, aimed at sharing information about the anchor as well as information students had explored because their interest was piqued by a specific aspect of the anchor. Group writing activities, including author circles, allowed students to critique each other's work and refine writing that could be published or could appear in the newsletter. Oral reports and skits, based on scenes from the anchor were presented by groups to the class. Library research time, provided so that students could pursue interests arising from studying the anchor, facilitated development of research skills.

In short, linking the video anchor with other reading, writing, and oral language activities allowed students to become more active in their own learning. They were able to expand what they were learning from the anchor into other literacy experiences. For example, student's stories began to reflect what they were learning about story structure from our anchor. Students' reports on the living conditions of the Victorian era represented an analysis of societal and economic issues of that time in history. Additionally, we began to see links between the anchor and what they were choosing to read in their free time.

Guiding Principle 7: Allowing Student Exploration

In order for students to develop a sense of expertise, opportunities were provided to allow students to explore the anchor as well as to explore areas of interest generated by the anchor. To facilitate this exploration, the videodisc was made available to students--it was not only under teacher control. Students were able to access the anchor and to find information, using the videodisc, during project time or as needed to find information. For example, when exploring Victorian architecture or setting information, students were able to find relevant scenes without asking for the teacher's help or permission. This resulted

in further exploration through library research, with the findings used to check the film's accuracy.

In order to effectively use the anchor for independent exploration, however, it was necessary that students had available to them an outline of scenes and frame numbers. Purposeful exploration required that students know where to look in the anchor to find relevant information. This was provided by the outline, developed jointly by teacher and students, listing scenes and frame numbers.

Other aspects of exploration included sharing. After students explored topics of interest either individually or within group projects, time was provided for class sharing of information. Sharing was accomplished either through the newsletter, mentioned earlier, or through formal skits and/or oral or written presentations. This resulted in several benefits, including more open-ended but relevant discussion, often initiated and controlled by the students. Allowing time to explore the anchor sparked interest in relevant topics that we had not anticipated.

Summary

In summary, there are seven principles that can be used to guide the selection and construction of anchors and the selection of teaching activities to accompany them. Each principle is dependent on the others. For example, until students develop expertise around the anchor (Principle 3), they cannot use their knowledge for purposeful exploration (Principle 7), or to most effectively link the video anchor to literacy tasks (Principle 6).

However, anchored instruction is not presented as a stand-alone or a new procedure to enhance learning. There is much known about what makes instruction more and less effective. Some of this knowledge includes the importance of background knowledge

(Anderson & Pearson, 1984), the importance of shared knowledge between teacher and student (Chapman, 1978), the benefit of cooperative learning (Slavin, 1983), the importance of motivation (Wigfield & Asher, 1984), the facilitative effect of problem generation (Bransford, Franks, Vye, & Sherwood, 1989) and so on. Unfortunately, although teachers generally acknowledge the importance of these issues, too often instruction does not incorporate this knowledge. Durkin (1984), for example, has found that teachers are aware of the importance of prediscussion to address background knowledge, yet found only a very small percentage of teachers using this procedure, even when advocated in a teachers' guide. Teachers often state that constraints relating to time, social, and linguistic factors in the classroom often preclude implementing what research has shown to be effective.

Based on what we know about effective teaching, anchored instruction was developed to provide opportunities for teachers and students to work cooperatively in shared experiences. The use of anchors encourages students to view anchors from their own perspective, to link learning across subject areas, to find information to explore problems that they identify, and to experience changes in their comprehension as they are introduced to new ideas from the teacher, from the texts, and from their peers. Providing an anchor is close to what has been advocated in other professions for some time. For example, it is closely parallel to case-based instruction in law and medicine.

Case-based instruction, as described by Christensen (1987), Learned (1987), and Rasinski (1989), is a process-oriented approach that encourages problem formulation and problem solving within thematically-tied units of instruction. Yet, the success of students' learning is dependent upon the richness of data presented in the cases (Gragg, 1940; Learned, 1987) and on supporting instruction that encourages students to examine cases

from multiple points of view. A goal that is common to both anchored instruction and theme-based case analysis instruction is to provide rich contexts for learning so that the content can be studied for different reasons. Such cross-examination enhances problem-solving and cohesive learning (Pichert, personal communication, April 3, 1989).

The principles presented in this paper are intended to be guides for those wishing to implement an anchored instruction approach. Although there is much more to be learned about how these guiding principles will affect other instructional settings and different kinds of anchors, we are beginning to see the potential for using these general guidelines in creating new anchors in additional curriculum areas. It is expected that the principles noted above will be continually refined as anchored instruction is attempted in new domains.

References

Anderson, J. R. (1983). The architecture of cognition. Cambridge, MA: Harvard University Press.

Anderson, J. R. (1987). Carnegie-Mellon University, skill acquisition: Compilation of weak-method problem solutions. Psychological Review, 94(2), 192-210.

Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretic view of processes in reading comprehension. In P. D. Pearson, R. Barr, M. L. Kamil, & P. Mosenthal (Eds.), Handbook of reading research (pp. 255-291). New York: Longman.

Bransford, J., Kinzer, C., Risko, V., Rowe, D., & Vye, N. (1989). Designing invitations to thinking: Some initial thoughts. National Reading Conference.

Bransford, J. D., Franks, J. J., Vye, N. J., & Sherwood, R. D. (1989). New approaches to instruction: Because wisdom can't be told. To appear in S. Vosniadou & A. Ortony (Eds.), Similarity and analogical reasoning (pp. 470-497). New York: Cambridge University Press.

Bransford, J. D., Sherwood, R. S., Hasselbring, T. S., Kinzer, C. K., & Williams, S. M. (in press). Anchored instruction: Why we need it and how technology can help. In D. Nix & R. Spiro (Eds.), Advances in computer-video technology. Hillsdale, NJ: Lawrence Erlbaum Associates.

Bransford, J. D., Vye, N. A., Kinzer, C. K., & Risko, V. (in press). Teaching thinking and content knowledge: Toward an integrated approach. In B. Jones (Ed.), Teaching thinking. Hillsdale, NJ: Erlbaum Associates.

Chapman, R. S. (1978). Comprehension strategies in children. In J. Kavanagh & W. Strange (Eds.), Speech and language in the laboratory school, and clinic. Cambridge, MA: MIT Press.

Christensen, C. R. (1987). Teaching with cases at the Harvard Business School. In C. R. Christensen (Ed.), Teaching and the case method (pp. 264-270). Boston, MA: Harvard Business School.

Durkin, D. (1984). Is there a match between what elementary teachers do and what basal reader manuals recommend? The Reading Teacher, 37, 734-744.

Gragg, C. I. (1940). Teachers also must learn. Harvard Educational Review, 10, 30-47.

Kinzer, C., Risko, V., Vye, N., & Sherwood, R. (1988). Macrocontexts for enhancing vocabulary acquisition. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Learned, E. P. (1987). Reflections of a case method teacher. In C. R. Christensen (Ed.), Teaching and the case method (pp. 9-15). Boston, MA: Harvard Business School.

Rasinski, T. (1989). The case method approach in reading education. Reading Horizons, 30, 5-14.

Risko, V. J., Kinzer, C. K., Goodman, J., McLarty, K., Dupree, A., & Martin, H. (1989, April). Effects of macrocontexts on reading comprehension, composition of stories, and vocabulary development. Paper presented at the meeting of the American Educational Research Association, San Francisco, CA.

Slavin, R. E. (1983). Cooperative learning. New York: Longman.

Wigfield, A., & Asher, S. R. (1984). Social and motivational influences on reading. In P. D. Pearson (Ed.), Handbook of reading research (pp. 423-452). New York: Longman.